

SAFETY FIRST ON THE FIRING LINE

Underground Shelters, Armored Trains and Armored Automobiles Are Used By Soldiers in Europe to Protect Their Lives

"Safety First" on the firing line sounds like a misnomer, but that is the watchword just the same. Napoleon never spared his men. That is how he differed from the generals of today. The first thought of the men who are directing the fighting in Europe is not for immediate success, but for ultimate success.

Napoleon was defeated because he lost too many men. He lost a noble army in Spain. He sacrificed another in Russia. He took no care of his wounded and when he wished to win a point he gave the word to charge and won. In the end he was beaten.

Today men are taught to spread out to protect themselves. They are taught to seek cover whenever possible. Their uniforms are made of a color invisible a short distance away. The famous Scots Greys painted their horses a drab color because the white horses could be seen too well in battle. Generals leave off their braid when they go into battle and keep it looking nice for parade.

In this war more than in any other, the soldiers have taken advantage of the defense holes in the earth can give. Advantage is taken of railroad embankments as breastworks. The men have covers for themselves for protection from aeroplane bombs. They stand behind the railroad embankments and fire through an opening somewhat like the loop holes of the block houses used to fight Indians.

Hospitals are not underground in caves. Wine cellars are turned into officers' headquarters. Armored automobiles and trains have played an important part in this conflict.

Even the submarine is a safety first device. It permits an attacker to proceed under water without being shot at by the one he is going to attack. General Braddock, who fought the French at Old Fort Duquesne, is a type of the old style soldier of more than a century ago. He did not believe in fighting under protection. He advanced on the French at Fort Duquesne in full dress, parade, regalia. When the French and Indians hidden behind trees opened fire on him he was helpless. His men shot from the hip because it was dishonorable to take careful aim at the enemy.

General Washington saved Braddock from annihilation because he had no scruples of fighting to kill. Braddock probably would not have used a submarine to fight with because it takes advantage of an unseeing enemy.

A letter telling of an attack by the German submarine U-26 upon an unnamed British warship is published by a newspaper at The Hague. It begins with preparations for the expedition "two hours before midnight," in order to make a strike at dawn. The letter, said to have been written by a member of the crew of the attacking boat, follows:

"Around the heavy granite rocks of the long pier, monstrously black in the dark night, the storm sweeps up the water of the North Sea in angry waves. Inside the pier the water lifts up our submarine in the regular motion of the waves. Everything is pitch dark. The fact that so many people are hurrying about on deck is only shown by the somber figures who now and then pass in front of the single lantern. From out of the engine room, already under water, there arises the sound of heavy pounding and the weird

crackling of the engines, which are being tried out.

SUBMARINE GOES IN QUEST OF ENEMY.

"When past 10 o'clock there is a shrill whistle from the little bridge which stands high above the submarine and which is covered with heavy canvas. The officer in command, dressed in oilskins, gives the signal of departure. A short, sharp signal to the engine room, the sudden whirr as the motor catches, and the U-26 is under way. The sharp bow plows through the water. On both sides of the ship long waves are formed, shimmering with light foam in the blackness of the sea. We move in a westerly direction. We are going towards the enemy.

"The heavens are covered with clouds. Not a star is visible. A few feet away from the boat nothing is noticeable at all. The commander with his experienced eye, tries in vain to penetrate through this wall of solid blackness. The wind is from astide and the bridge is entirely flooded with water. No noise is heard except the heavy droning sound of the motor and the swish of the water passing along our sides.

"The earliest signs of dawn appear when suddenly in the near distance there is the sight of a heavy bulk swinging high above as upon the surface of the water. We pass through the long tail of foam which a hostile torpedo destroyer has just left behind, speeding towards the east. We have managed to find our way through the first line of the enemy's advance guard. From now on we must be very careful.

"A signal is heard and men appear upon deck. The boat is prepared for action. The flagpole is taken down. Part of the bridge is folded together and well fastened. The periscope is brought up to the proper height. Then the entrance through the combined bridge and conning tower is hermetically

AT TOP—An armored train. **Center**—An armored automobile. **Below**—A cave where supper is being cooked. Many of the men in this picture are wounded.

closed. The tanks are opened and the rushing waters tell us that the boat is about to submerge. The gasoline motors stop their endless song. Electricity will drive us from now on until we shall reappear upon the water.

"A young Lieutenant is posted at the periscope and looks for the enemy. The sailors take their position near the torpedoes. The interior of the boat is lighted with two small electric bulbs. They make the darkness visible, but give no light. Here and there is a stale smell of oil. It is impossible to speak to each other with the noise of the engine and the water. The heat in the small room is oppressive.

STORM MAKES ITSELF FELT UNDER WATER.

"From time to time the officer in command of the three torpedoes looks at his watch or with his compass, both of which he carries around his wrist. Intently the men all watch the signboard on the wall in front of them. The storm which is raging upon the surface makes itself felt in the depths. Every motion of the water causes the boat to rock up and down and up and down.

"We think of the advantage of the man on board a warship. If his time comes he can go down with a last look at the happy sun and the blue sky. We see nothing, hear nothing. If the boat is to go down, we shall all suffocate in the darkness under water.

"Suddenly we all jump and forget heat and bad air and discomfort. In

small lighted letters the signboard says, 'Attention.' The officer in command holds the lever which will release the first torpedo. The sailors make ready to launch the second one as soon as the first has gone. A few seconds passing we must be very near the enemy. Suddenly the first sign disappears, half a second later the red, glowing letters say, 'Fire.' With a single jerk the lever releases the torpedo. A short metallic click, the noise of water rushing into the empty tube and all is over. The second torpedo is at once pushed into the tube. A few seconds later and the interior of the submarine looks as before the attack began.

"But what of the first torpedo?

Did she reach her goal? Instinctively we have all kept count—100 meters, 200 meters, 300—400. Under water no sound penetrates. We hear only the noise of our engines. We wait. Nothing happens. Then, suddenly we are all thrown together by the jerky movement of the boat. Twice or three times more we feel that we have changed our course very abruptly.

"Then the boat rolls as before. The regular purring of the engines is heard. Our submarine is rapidly moving eastward.

"We are on our way home. The attack has been successful."

Advance in Medicine. Fortunately for us all, when in

these days anyone in the family is stricken with a sore throat and diphtheria is suspected, says Dr. John Nelson Goltra, in Preventive Medicine, there is a simple plan which will guarantee few, if any deaths will occur from this once dreadful malady. The unexplained wonder is that so many are slow to avail themselves of the safeguards offered. They seem to have a greater dread of the presence of the diphtheria sign on the house than they have a much more wholesome and reasonable "dread of the disease.

The death rate from diphtheria is too high everywhere, this authority asserts. It is only necessary to use the antitoxin soon enough. The

globulins which it contains are entirely harmless. Safety lies in giving the antitoxin early in the disease, before the germs have time to overwhelm the system with their poison.

The death rate from diphtheria among those who receive the antitoxin within the first three days is practically nil. Some die who get the antitoxin on the fourth day. More get it on the fifth day, and still greater numbers are so unfortunately neglected that they do not get it until after the sixth day.

Three usual sources of the disease are school contacts, household contacts and milk. Diphtheria is not a disease which spreads very far nor very freely, probably not through the air at all. It is essentially a contact infection. Persons in other parts of the house are not liable to become infected, provided precautions as to absolute cleanliness in regard to this specific infection are observed. Do not let any members of the family touch anything from the sickroom, neither clothing nor utensils, nor mingle with those in attendance.

The trying question in many cases is the question of diagnosis. When the onset is severe; when the fever is high and the heart is beating rapidly with a full and bounding pulse; when the sick one is very much prostrated and is vomiting; when the face is flushed and the throat is sore, and there are severe pains in the jaws and neck, there will be little doubt, for the train of symptoms point closely toward the dreaded disease.

In the greater number of attacks, however, the onset will be less marked and there is likely to be some question as to just what is the matter with the child. While a sore throat does not always mean diphtheria, yet it is equally true that the throat symptoms in an attack of diphtheria are not always plain. It does not answer merely to look at the tonsils, and if you find no white spots to say at once that the case is not diphtheria. On the other hand, not by any means all tonsils which have white or yellowish spots on them are diphtheritic.

Until very recent times physicians have been compelled to depend for settlement of this vexing question upon whether or not the spots on the tonsils would rub off. Nowadays, however, he depends wholly for diagnosis upon laboratory examinations, when he is fortunate enough to have access to this valuable aid. If not, he makes up his mind on the symptoms and uses antitoxin in all cases in which he is in doubt.

In using the laboratory test, a sterilized cotton swab is applied to the tonsils and throat, and is then placed in a sterile test tube and sent to the laboratory. Here it is slipped into another test tube partly filled with a sterile culture medium which is especially favorable to the growth of the Klebs-Loeffler bacillus, the germ of which causes diphtheria. This tube is called the culture tube. If the germ was present on the throat or tonsils, the culture tube will, in the course of six to twelve hours, contain a few pearl-like dots along the line where the cotton touched the culture medium. In that case the result of the test is said to be "positive," which means that the poison of diphtheria is there.

But if no such little pearly colonies of the germs are found, it is the rule to make another test. Only when two or more negative results are obtained is the subject held to be safe.